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(54) Title: COMPOSITIONS AND METHODS FOR ANTI-ADDICTIVE NARCOTIC ANALGESIS ACTIVITY SCREENING AND TREATMENTS

(57) Abstract

The present invention provides assays to measure the regulation of the narcotic analgesic addictive state. Practice of the invention permits classification of test compounds for their effects on an activated opioid μ receptor state. When opioid μ receptor cells are treated with a test composition under investigation, then in one embodiment the propensity of the test composition to elicit a spontaneous cAMP overshoot and an inverse agonist induced cAMP overshoot is determined and serves as a surrogate measure of addiction liability. The inverse agonist induced cAMP overshoot signifies the presence of what is designated as the constitutively active state for the opioid μ receptors. The use of these assays has led to the identification of compounds that have the desired effects on the constitutive activation of the opioid μ receptors. The therapeutic potential of these compounds include treating patients who are addicted to a narcotic analgesic or who have taken an overdose of a narcotic analgesic, or whose paints being relieved with a narcotic analgesic.

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